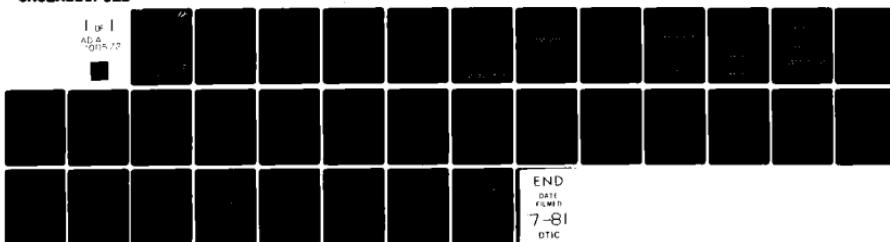


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CULTURAL RESOURCES SURVEY OF AREAS TO BE AFFECTED BY  
NEW FACILITIES AT TWO LOCATIONS WITHIN THE INDIAN  
MEMORIAL RECREATION AREA, LAKE OAHE, SOUTH DAKOTA

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A Report Prepared for the  
U.S. Army Corps of Engineers - Omaha District  
by the  
South Dakota Archaeological Research Center, Fort Meade.

In Fulfillment of 15  
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ABSTRACT

A cultural resources survey was undertaken at two areas within the Indian Memorial Recreation Area; these areas will be affected by the construction of new facilities. The survey included a records search, field surface reconnaissance, and field testing with respect to the project locations. Results of the records search, results of the field work, a general cultural historical outline, and references to previous research in the area are presented. There is no indication that any prehistoric or early historic remains will be disturbed by construction of these two projects. Further work is not recommended from a cultural resources management perspective.

## INTRODUCTION

The U. S. Army Corps of Engineers, Omaha District, has planned the expansion of a subsurface sand filter and the construction of a new sanitary disposal facility at two locations within the Indian Memorial Recreation Area, Lake Oahe, near Mobridge, South Dakota (Maps 1, 2, and 3). Because several major earthlodge village sites are located in the immediate vicinity of the proposed project areas, these areas were judged to have a high probability of significant cultural resources. Project plans, therefore, included a surface survey and a testing program in the areas where construction activities may occur. Although portions of the project areas had been somewhat disturbed by the previous development of recreation facilities, the possibility of cultural resources still existed.

The South Dakota Archaeological Research Center was notified of the proposed project, submitted a proposal with respect to the "Scope of Work" on the cultural resources survey, and was notified to proceed on 1 June 1978. The purpose of the survey was to evaluate the potential impact of the two projects on cultural resources. All areas to be affected by the projects were evaluated by pedestrian surface survey and a small diameter soil probe was used at regular intervals. In addition, several test pits were excavated in the project areas. Adjacent areas where surface visibility was good, such as along dirt roads and in a tree planted windbreak area, were also inspected. At the time of the survey, the water level in Lake Oahe was very high and, therefore, beach areas and adjacent cutbanks at the Indian Memorial Recreation Area were not available for inspection.

Field work was conducted on 7, 8, and 9 June 1978 by Holly Hathaway, Steve Keller, and Tom Haberman. Weather conditions were ideal for field work.

All project data, including photographs and negatives, were sent to the U. S. Army Corps of Engineers, Omaha District, for curation. No artifactual material was collected or observed in the project area during the course of the field work.

#### RECORDS SEARCH AND PRIOR INVESTIGATIONS

Prior to the field work, a records search was made of the documents at the South Dakota Archaeological Research Center. The National Register of Historic Places, the State card file inventory of prehistoric and historic sites, and the field records of the Smithsonian Institution River Basin Surveys for Corson County, South Dakota were reviewed in the records search.

No sites presently on the National Register were found to be affected by the proposed projects in the Indian Memorial Recreation Area. The National Register site closest to the project area is Molstad Village. This prehistoric site is situated in Dewey County, South Dakota about 18 miles south of Mobridge. Molstad Village is cited in the National Register of Historic Places 1972 (National Park Service 1972: 445) and a copy of the Nomination Form is on file at the South Dakota Archaeological Research Center (Corbyn 1976). Molstad, a small, fortified earthlodge village site, has been assigned to the Extended Variant of the Coalescent Tradition (Lehmer 1971: 115-120). Molstad Village has been partially excavated and reported by J. J. Hoffman (1967). It should be noted that several village sites in the immediate vicinity of the Indian Memorial Recreation Area may be eligible for nomination to the National Register, although they are not included at present.

The State card file inventory of prehistoric and historic sites for Corson County, South Dakota was reviewed with respect to the legal location of the two proposed sanitary disposal facilities in the Indian Memorial Recreation Area. No recorded sites were found to be directly affected. In the records search, the following legal descriptions were considered:

Township [REDACTED] North, Range [REDACTED] East, Sections [REDACTED] and [REDACTED] and Township [REDACTED] North, Range [REDACTED] East, Sections [REDACTED] and [REDACTED].

There seems to be some confusion with respect to the sites which have been recorded in the vicinity of the Indian Memorial Recreation Area. The following is a list of presently known sites within the boundaries of the above cited legal locations. Brief comments are provided with respect to each of these sites. For sites which have published names, the site name, or names, are given in addition to the site number. Several of the sites do not have published names or local names recorded on the State site cards. In these cases, no site name is given. None of these sites will be directly affected by the proposed work which is reviewed in this report.

39C014 - Davis Site, Lower Grand, or Grand River Village

Location: [REDACTED] of [REDACTED] of [REDACTED] of Section [REDACTED] or [REDACTED] of [REDACTED] of Section [REDACTED],  
Township [REDACTED] North, Range [REDACTED] East.

Comments: This important earthlodge village site is situated on a high terrace overlooking the Grand River. The site area was not inundated by Lake Oahe but is subject to shoreline erosion. Several professional excavations have been conducted at the site. Lehmer (1971), in Appendix 1: Major Salvage Excavations in the Middle Missouri Valley, indicated that work was conducted at 39C014 by Bowers for the Smithsonian Institution River Basin Surveys in 1962 and 1963 and by Wood and Falk through the University of Missouri in 1969.

The Davis Site is specifically mentioned by Lehmer as being significant in several respects. Lehmer (1971: 116) writes:

"Most of the excavated Extended Coalescent villages had very thin refuse deposits and yielded smaller numbers of artifacts than the majority of sites of the Middle Missouri Tradition. This implies that they were occupied for only short periods of time and that the Extended Coalescent population was generally a rather mobile one."

'A few Extended Coalescent sites, mostly in the Grand-Moreau region, depart radically from the other villages representing this complex. Sites of this sort are typified by the Davis Site (39C014). The houses are closely packed inside an extensive fortification system and heavy deposits of refuse point to a long occupation. Internal evidence indicates that these sites were late within the total span of the Extended Coalescent Variant."

Ahler (1977b: 10), however, suggests a much earlier date for the site.

And, with respect to fortification systems known from Extended Coalescent Variant village sites, Lehmer (1971: 116-118) writes:

"The Davis Site exhibits still another combination of village plan and fortification system. The occupation area adjoins a steep bank, and the village is enclosed on the other three sides by a well-defined ditch. The ditch, in contrast to those at most other fortified Extended Coalescent sites, was laid out in irregular lines which form a rough rectangle."

A complete site report detailing work done at 39C014 is not yet generally available. Bowers (1963) has presented a brief review of the work he conducted at the site. He suggests that two, and possibly three, components are present at the site. Data from 39C014 have been used by Ahler (1977a) in a study of utilization patterns associated with various lithic resources.

Some confusion regarding the Davis Site (39C014) and the Red Horse Hawk Site (39C034) appears to exist in the Archaeological Field Notes of W. H. Over, edited by Sigstad and Sigstad (1973). The sketch map presented on page 39 (reproduced as figure 1 in this report), which is labeled "Grand River Village," appears to this writer to be what has been called, by more recent researchers, the Red Horse Hawk Site. The sketch map on page 57, which is labeled "Red Horse Hawk," seems to be of the site which recent investigators have called the Davis Site or Lower Grand. This is apparently not simply an error in labeling the figures, however, because the text is internally consistent with the site names as presented on the sketch maps. At this time the writer is unable to suggest whether this conflict may be due to an

editorial error in sifting through Over's original notes or due to a reversal of site names which occurred during the recording of sites in the area by the River Basin Surveys project. (Perhaps it should be pointed out that caution should be taken in using the uncorrected copy of "Over's Notes" which is in the library at the South Dakota Archaeological Research Center. Apparently this uncorrected volume source has led to some confusion with site numbers in the State site card file.)

39C034 - Red Horse Hawk

Location: [REDACTED] of [REDACTED] of Section [REDACTED] Township [REDACTED] North, Range [REDACTED] East.

Comment: This fortified earthlodge village site is located on a terrace. The site is situated a few hundred meters southeast of the Davis Site (39C014) and overlooks what was the confluence of the Missouri and Grand Rivers. Red Horse Hawk is a Post-Contact Coalescent Variant site. Lehmer (1971), in Appendix 1: Major Salvage Excavations in the Middle Missouri Valley, indicates that Bowers excavated at the site in 1962 and 1963 for the River Basin Surveys project. Excavation at the site was extensive and a detailed report on this work is not yet generally available. Bowers (1963) briefly summarizes the field work at Red Horse Hawk. Copies of the field records of the Smithsonian Institution River Basin Surveys field work done at Red Horse Hawk are on file at the South Dakota Archaeological Research Center. This rather extensive information includes copies of the field record forms, photo records, and specimen catalog.

39C046

Location: Section [REDACTED] Township [REDACTED] North, Range [REDACTED] West.

Comment: There is a card in the State site card file with the site number 39C046; it is referred to as a "Mandan Village" located adjacent to the mouth

of the Grand River. The writer believes that this site number was probably assigned on the basis of a sketch map as presented in the Archaeological Field Notes of W. H. Over, edited by Sigstad and Sigstad (1973: 39). The map in question (Figure 1) is labeled "Grand River Village" but is believed to actually represent the site now referred to as Red Horse Hawk (see comments under 39C014). Over's map indicates an "Old Mandan Village on this Point", south of the Red Horse Hawk site. Over's text reads, "On the same flat to the south there are several scattered lodge circles, very old and of Mandan origin. Much of this has been under cultivation at one time, and the number could not be determined (Sigstad and Sigstad 1973: 41)." This writer further believes that this site number and reference may very well apply to essentially the same site which is more currently known as the Travis I Site, 39C0213. If this is indeed the case, it is suggested that the site number 39C0213 be retained in view of the wide publication of this site number in Lehmer (1971: 67 and 117) and in view of current research at the site which has utilized this number.

39C054 - Grand River Village Mound

Location: [REDACTED] of [REDACTED] of Section [REDACTED], Township [REDACTED] North, Range [REDACTED] East.

Comment: This site number has been assigned to a mound indicated on Over's sketch map labeled "Grand River Village" (Figure 1) (Sigstad and Sigstad 1973: 39). The site consists of one mound which is located south of the "Grand River Village". If the comments under 39C014 are correct, perhaps it would be more appropriate to refer to this site as the "Red Horse Hawk Mound."

39C0204

Location: [REDACTED] of [REDACTED] of Section [REDACTED], Township [REDACTED] North, Range [REDACTED] East.

Comment: This site is characterized as a habitation/ceramic site.

A cultural affiliation for the site is not offered. The site is located north of the Grand River and is not of concern with respect to the Indian Memorial Recreation Area.

39C0213 - Travis I Site

Location: [REDACTED] of [REDACTED] of [REDACTED] and [REDACTED] of [REDACTED] of [REDACTED] of Section [REDACTED], Township [REDACTED] North, Range [REDACTED] East.

Comment: The Travis I Site is situated on the point of land extending into Lake Oahe on the west side of the reservoir, south of the Highway 20 bridge and just east of the Indian Memorial Recreation Area. The site contains prehistoric components representing the Extended Middle Missouri Variant, the Extended Coalescent Variant, and possibly the McKean Complex.

39C0214

Location: [REDACTED] of [REDACTED] of Section [REDACTED], Township [REDACTED] North, Range [REDACTED] East.

Comment: The type of remains indicated at this site is listed as "ceramic". possibly a village component or activity area. The site is situated south of the areas to be affected by the new facilities at the Indian Memorial Recreation Area.

39C0215

Location: [REDACTED] of [REDACTED] of [REDACTED] of Section [REDACTED], Township [REDACTED] North, Range [REDACTED]  
[REDACTED] or [REDACTED] of [REDACTED] of [REDACTED] of Section [REDACTED], Township [REDACTED] North, Range [REDACTED] East.

Comment: Lithic debris was found at this site location. The site may be associated with, perhaps as an activity area, one of the earthlodge village components known to be in the vicinity. The site location appears to be just to the south, or southwest, of the Davis Site (39C014). Generally, this site is located between the two project areas at the Indian Memorial Recreation Area and will not be affected by either of them.

#### CULTURAL HISTORICAL OUTLINE

Table 1 proposes a general cultural historical outline for the Mobridge vicinity. The table indicates periods, approximate dates, cultural expressions, and brief comments on some of the major cultural characteristics. Table 2 presents a more specific outline of the Coalescent and Middle Missouri village traditions. The table indicates variants which have been defined for these traditions by Lehmer (1971), their dates, and the number of component in the Mobridge/five-county area assigned to each variant. The site counts included in Table 2 are from Corson and Dewey (excluding the area of former Armstrong County which is now a part of Dewey County) Counties, west of the Missouri, and Campbell, Wauworth, and Potter Counties, east of the Missouri River. Counts for the number of components assignable to the variants were drawn exclusively from the distribution maps presented by Lehmer (1971).

Lehmer's Introduction to Middle Missouri Archeology (1971) provides an excellent synthesis of the village cultures along the Missouri River in North Dakota and South Dakota. Wedel's Prehistoric Man on the Great Plains (1961) provides a more general overview of Plains prehistory. Neuman (1975) provides a useful report on and synthesis of Woodland sites in the Dakotas. Several of the Sonota complex Woodland sites which Neuman describes are situated along the Missouri River south of Mobridge. Ahier, Cvancara, Madsen and Kornbrath (1977) describe the test excavations at the Travis 2 Site, 39WW15, a site just southeast of Mobridge with a plano-complex component of major importance for the area. More specific site reports and some interpretive articles which deal with village tradition sites in the five-county area around Mobridge include the following: Ahier (1977b); Baerreis and Dallman (1961); Bass, Evans, and Jantz (1971); Hoffman (1963 and 1967); Hurt (1957 and 1974); Hurt, Buckles, Fugle, and Agogino (1962); Krause (1972); Lehmer

(1970); Miller (1964); Owsley, Berryman, and Bass (1977); Parmalee (1977); Smith (1963); Stephenson (1969 and 1971); Strong (1933 and 1940); Wedel (1955); Wilmeth (1958); and Woodworth and Wood (1964).

Table 1. General Cultural Historical Outline for the  
Mobridge/Five County Area in North Central South Dakota

<u>Periods</u>	<u>Approximate Dates</u>	<u>Cultural Traditions and Complexes</u>	<u>Comments and Characteristics</u>
		Euroamericans	Exploration, Trade, and Settlement
Historic/ Equestrian		Historic Dakota	Occupation of the Area by Equestrian Dakota Groups at the Advent of Written History
	A.D. 1780	Disorganized Variant of the Coalescent Tradition	Occupation of Several Village Sites in the Area by the Historic Arikara
Plains Village		Coalescent Tradition	Village Farmers and Bison Hunters -- Construction of Circular Earth Lodges
	A.D. 1100	Middle Missouri Tradition	Village Farmers and Bison Hunters -- Construction of Rectangular Lodges
Plains Woodland	500 B.C.	Sonota Complex	Construction of Burial Mounds -- Introduction of Ceramics and perhaps Domesticated Plants? Pedestrian Bison Hunters
Plains Archaic	6,000 B.C.	McKean Complex	Pedestrian, Nomadic Bison Hunters -- Hunting and Gathering Economy -- Projectile Points Typologically Associated with this Cultural Complex have been Found Along the Beach at the Travis I Site - 39C0213
Paleo-Indian	10,000 B.C.	Plano Complex Folsom Complex Llano Complex	Hunters of the Big Game Hunting Tradition -- Llano and Folsom Complex Peoples Hunted now Extinct Large Mammals -- Llano and Folsom Complex Sites not yet Reported from the Area -- Plano Complex Represented at the Travis 2 Site - 39WW15

Table 2. Adapted from Lehmer 1971: 33 - Table 2  
"Cultural Traditions and Variants in the Middle Missouri Subarea".

<u>Tradition</u>	<u>Variant</u>	<u>Number of Components in the Mobridge/Five County Area</u>	<u>Dates</u>
Coalescent	Disorganized	2	A.D. 1780-1862
	Post-Contact	14	A.D. 1675-1780
	Extended	51	A.D. 1550-1675
	Initial	0	A.D. 1400-1550
Middle Missouri	Terminal	2*	A.D. 1550-1675
	Extended	9	A.D. 1100-1550
	Initial	0	A.D. 900-1400

\* Perhaps these two sites, Jake White Bull (39C06) and Helb (39CA208), may more appropriately be regarded as Extended Middle Missouri components (Anier 1977b and Falk and Calabrese 1973). However, two occupations may be represented at Helb (Thiessen and Nickel 1975); Lehmer (1971: 122) was aware of differences between these and other Terminal Middle Missouri sites and suggested that they may be early Terminal Middle Missouri villages or sites occupied during a transitional period between the Extended and Terminal Middle Missouri variants.

## DESCRIPTION OF THE PROJECT AREA

The project area north of Highway 20 (Maps 1 and 2) seems to be situated in an area which has previously been modified by the addition of landfill and surface recontouring. Herbaceous vegetation in the area is predominated by buffalo grass (Buchloe dactyloides), a native North American prairie species which may have been seeded at this location. Widely spaced tree plantings are also present.

The project area south of Highway 20 (Maps 1 and 2) is predominated by planted and/or non-native vegetation. In the areas where the septic tank and absorption trenches may be constructed, predominate vegetation consists of a rather dense stand of cheat grass (Bromus sp.). The pipeline from the septic tank to the proposed location of the disposal station crosses a planted shelter belt area. The waterline to run to the north closely follows the existing paved road; a grassed area. The powerline to run generally east crosses a grass covered area with tree plantings.

More generally, the Indian Memorial Recreation Area is situated in the high terrace adjacent to the Missouri River trench; an area dominated by the Plains grassland floral association (Van Bruggen 1976). Characteristic plants of the Plains grasslands include wheatgrasses (Agropyron spp.), grama grasses (Bouteloua spp.), and buffalo grass (Buchloe dactyloides), as well as other less dominant grasses and a variety of forbs. Wooded bottom land existed along the Missouri River and Grand River in close proximity to the project areas. Along major river drainages in South Dakota, alluvial deposits occur; these deposits support the growth of a variety of trees and shrubs. Major deciduous tree species found along the Missouri River valley in South Dakota include boxelder (Acer negundo), green ash (Fraxinus pennsylvanica), cottonwood (Populus deltoides), bur oak (Quercus macrocarpa), American elm (Ulmus americana), and willows (Salix spp.).

Fauna in the region included bison, elk, antelope, deer, bear, and a variety of smaller mammalian species. Seasonal concentrations of migratory waterfowl and fish provided additional faunal resources.

## SURVEY STRATEGY AND METHODOLOGY

The sanitary disposal facilities planned for the Indian Memorial Recreation Area will not affect extensive areas of land. All of the land surface to be affected by the projects was intensively inspected by pedestrian survey. Adjacent areas including a dirt road and cultivated shelter belt planting where surface visibility was especially good were also inspected. The surface reconnaissance of the project areas revealed no indications of cultural resources in the areas to be affected by the proposed facilities. Just northeast of the project area south of Highway 20 (Maps 1 and 3); a few small, weathered bone fragments were found exposed in the dirt road. No cultural material could be found in this area and thus, it was not recorded as a site location. In any event, these were beyond the immediate area to be affected by the proposed projects.

Due to the proximity of several known earthlodge village sites and the potential for buried sites in this general area, more intensive survey testing work was judged to be desirable. Buried sites, especially pre-village cultural materials, are a distinct possibility in the loess covered bluff and high terrace areas along the Missouri River Trench (cf. Ahler, Davies, Falk, and Madsen 1974). Information from such sites is needed to fill out the culture history of the Middle Missouri area, but such sites are impossible to detect by surface survey techniques except in eroded areas. Activity areas or special purpose sites associated with but outside of earthlodge villages proper are also likely to occur in this area. In some cases it may be possible to associate such sites with a village tradition or perhaps even specific village sites. Knowledge of the types, extent, and characteristics of such sites, other than cemeteries, is very limited at present. There seems to be a very high probability for the

occurrence of sites of this type within the Indian Memorial Recreation Area because of the several known village sites in the immediate area. For these reasons, a testing program that included the excavation of several test pits and the extensive use of a small diameter soil probe in the areas to be affected was incorporated into the cultural resources survey. The procedures and results of this testing area discussed in more detail in the following section of this report.

## DESCRIPTION OF THE SURVEY AND TESTING RESULTS

No sites were recorded and no cultural materials were collected during the course of the fieldwork conducted at the two project areas in the Indian Memorial Recreation Area.

Testing included the excavation of several test pits and the extensive use of a small diameter soil probe. The test pits were excavated with shovels and trowels and the matrix removed was passed through one-fourth inch mesh screen. No cultural materials or other evidences of site locations were found in the test pits and no old soil surfaces were in evidence in the test pit profiles. These test pits should have disclosed the presence of buried cultural materials if such were present. The test pit walls provided comparative soil profiles useful in the interpretation of the soil cores obtained with the use of a soil probe. The soil probe was used at regular intervals over the areas to be used for the sanitary disposal facilities and along the proposed sewer pipe, water line, and powerline routes as indicated on the project plans furnished by the U. S. Army Corps of Engineers.

The project area south of Highway 20 at the Indian Memorial Recreation Area (Maps 1 and 3) appeared to have considerably more potential for undisturbed cultural material than the location north of the highway. Two test pits were excavated in the south project area. Test Pit 1, a 1 by 1 meter square, was placed in the area where the proposed absorption trenches would be located. Excavation of the test pit proceeded with a shovel. Arbitrary excavation levels of approximately 15 to 20 centimeters in depth were used in the excavation. A portion of the matrix from each level was screened through one-fourth inch mesh screen. Trowels were used to clean the sides and bottom of the test pit for visual inspection after the excavation of each level. This test square was terminated at 70 centimeters below the

present soil surface. The bottom of the test pit was still in a loess deposit. The soil probe was used in the bottom of the test pit to take a 60 centimeter soil core. The soil became very compact at a depth of about 130 centimeters below the present surface. No buried soil horizons were observed in the test pit profile (Figure 2) or in the deeper soil probe. No cultural material was recovered. A profile was drawn (Figure 2), the test pit and representative profile was photographed; and the test pit was then backfilled. A second test pit, Test II was located in the area of the proposed sanitary disposal station. A soil profile similar to that of Test I was present in this area but the loess deposit was apparently not quite so deep; this location is slightly higher in elevation. Test II, excavated in the same manner as Test I, extended to a depth of 75 centimeters. The soil probe was used in the bottom of the test pit. The soil probe indicated that 60 centimeters farther in depth, a total of about 135 centimeters below the present ground surface, there is a layer of gravel and rock. This layer of gravel and rock could not be penetrated with the soil probe. Immediately above this layer of gravel and rock, there is a layer of sandy soil. The layer of sandy soil is approximately 20 centimeters in thickness and is 115 to 135 centimeters below the present ground surface. No cultural material or indications of a site were found in Test II. There were no indications of buried soil horizons. A profile drawing of one of the test pit walls was prepared (Figure 3), the test square was photographed, and the test pit was then backfilled.

In addition to the excavation of test pits, the area to be affected by the proposed project south of Highway 20 (Maps 1 and 3) was extensively tested with a small diameter soil probe. Testing with the soil probe extended to a depth of approximately 100 centimeters below the present soil

surface. The area where the proposed absorption trenches would be located was tested with the soil probe in a grid pattern of 1 meter intervals. The pipeline route from the absorption trenches to the septic tank, the septic tank area, and the pipeline route from the septic tank to the sanitary disposal station were tested in linear fashion with the soil probe at approximately 1 meter intervals. The powerline route from the sanitary disposal station to the street light was tested with the soil probe at approximately 2 meter intervals. The area to be affected by the proposed sanitary disposal station was tested with the soil probe in a grid pattern of approximately 3 meter intervals. The route of the proposed water line which would run north along the existing paved road was tested in linear fashion with the soil probe used at approximately 3 meter intervals. There were no indications in any of the soil cores to suggest the presence of buried cultural materials or features in the areas tested.

The proposed project north of Highway 20 at the Indian Memorial Recreation Area (Maps 1 and 2) would include the installation of a new subsurface sand filter and pipeline. A small shovel test pit was dug near the center of the area where the new subsurface sand filter may be installed. This test pit measured approximately 0.5 by 0.5 meter and extended to a depth of 60 centimeters. At a depth of approximately 25 centimeters below the present surface, there is a color change to a somewhat lighter colored soil. The soil probe, used in the bottom of the test pit, indicated that the lighter colored soil continues to an undetermined depth. Along both edges, across both ends, and down the middle of the area where the new subsurface sand filter may be installed the soil probe was used at 2 to 3 meter intervals. A very hard, compact soil layer was encountered at a depth of about 20 to 30 centimeters below the present ground surface; this layer could not be penetrated with the soil probe.

The route of the proposed pipeline which would run southwest of the land filter area was also tested with the soil probe at 2 to 3 meter intervals. On the west side of the knoll on which the facility may be constructed, the soil probe indicated a fine, sandy layer which suggested that the area may, at least in part, be fill and may have been subjected to considerable surface recontouring during the previous construction of facilities at this location. In any case, there were no indications of prehistoric or early historic cultural resources which would be affected by the proposed project.

#### ANALYTICAL METHODOLOGY

No cultural materials were collected in conjunction with this cultural resources reconnaissance and, therefore, no such materials are curated as a result of this project. No previously unreported site locations were recorded. Photographs, negatives, and other project data were sent to the U. S. Army Corps of Engineers, Omaha District, for curation.

## CONCLUSION AND RECOMMENDATIONS

The results of the intensive cultural resources survey of the areas to be affected by new facilities at two locations within the Indian Memorial Recreation Area suggest that no prehistoric or early historic cultural resources would be affected by the proposed projects.

There remains a possibility that deeply buried sites may exist in the project areas. The project area south of Highway 20 appears to have more potential in this respect than the location north of the highway. The testing program conducted in conjunction with this project, due to the significant cultural resources previously known to exist in the general vicinity, greatly minimizes the possible disturbance of any cultural resources. However, it is possible that such exist at a depth which could not be reached with the soil probe. If such a deeply buried site does exist in the area, it is very likely that it would be highly significant in terms of interpreting the culture history of the area. Thus it is recommended that, if any prehistoric cultural material should be encountered during the course of construction activities, appropriate personnel in cultural resources management with the U. S. Army Corps of Engineers, Omaha District, or the State Archaeologist at the South Dakota Archaeological Research Center, Fort Meade, be immediately notified and that further disturbances should not be permitted until the significance of such a find is determined.

## BIBLIOGRAPHY

Ahler, Stanley A.

1977a Lithic Resource Utilization Patterns in the Middle Missouri Subarea. In: Trends in Middle Missouri Prehistory; A Festschrift Honoring the Contributions of Donald J. Lehmer, edited by W. Raymond Wood. Plains Anthropologist 22(78) Pt.2:132-150. Memoir 13. Lincoln.

1977b Archeological Reconnaissance and Test Excavation at the Jake White Bull Site, 39CC65, Oahe Reservoir, South Dakota. Prepared in fulfillment of Purchase Order No. DACW45-76-M-3883, dated 19 September 1976, from the U. S. Army Corps of Engineers, Omaha District, to the University of North Dakota.

Ahler, Stanley A., David K. Davies, Carl R. Falk, and David B. Madsen

1974 Holocene Stratigraphy and Archeology in the Middle Missouri River Trench, South Dakota. Science 184 (4139):905-908. Washington.

Ahler, Stanley A., Alan M. Cvancara, David B. Madsen, and Richard W. Kornbrath

1977 Archeological Reconnaissance and Test Excavation at the Travis 2 Site, 39WW15, Oahe Reservoir, South Dakota. Prepared in fulfillment of Purchase Order No. DACW45-76-M-3846, dated 17 September 1976, from the U. S. Army Corps of Engineers, Omaha District, to the University of North Dakota.

Baerreis, David A. and John E. Dallman

1961 Archaeological Investigations near Mobridge, South Dakota. Archives of Archaeology No. 14. The Society for American Archaeology and the University of Wisconsin Press. Madison.

Bass, William M., David R. Evans, and Richard L. Jantz

1971 The Leavenworth Site Cemetery: Archaeology and Physical Anthropology. University of Kansas Publications in Anthropology Number 2. Lawrence.

Bowers, Alfred W.

1963 Investigations in the Mobridge Area, South Dakota. In: Proceedings of the 20th Plains Conference, Robert L. Stephenson (Ed.). Plains Anthropologist 8(20):115-132, p. 118. Lincoln.

1967 Field Report: 1964 Excavations of the Davis and Larson Sites, Near Mobridge, South Dakota. Plains Anthropologist 12:204-205.

Corbyn, Ronald C.  
1976 National Register of Historic Places Inventory--  
Nomination Form. For Molstad Village (39DW234).  
Copy on file, South Dakota Archaeological Research  
Center, Ft. Meade.

Falk, Carl R. and F. A. Calabrese  
1973 Helb: A Preliminary Statement. Plains Anthropologist  
18(62) Pts. 1-2:336-343. Topeka.

Hoffman, J. J.  
1963 Investigation of the Swift Bird House (39DW233) in  
the Oahe Reservoir, South Dakota. Plains Anthropologist 8(22):249-256. Lincoln.

1967 Molstad Village. Publications in Salvage Archeology,  
No. 4. Smithsonian Institution, River Basin Surveys.  
Lincoln.

Hurt, Wesley R., Jr.  
1957 Report of the Investigation of the Swan Creek Site,  
39WW7, Walworth County, South Dakota, 1954-1956.  
Archaeological Studies, Circular No. 7. The South  
Dakota Archaeological Commission, Pierre.

1974 Report of the Investigations of the Rosa Site 39P03  
Potter County, South Dakota 1957. Archaeological  
Studies Circular No. 9 (Revised Edition). John S.  
Sigstad and Joanita Kant Sigstad, General Editors.  
South Dakota Department of Education and Cultural  
Affairs.

Hurt, Wesley R., Jr., William G. Buckles, Eugene Fugle, and  
George A. Agogino  
1962 Report of the Investigations of the Four Bear Site,  
39DW2, Dewey County, South Dakota, 1958-1959.  
Archaeological Studies, Circular No. 10. W. H. Over  
Museum, State University of South Dakota, Vermillion.

Krause, Richard A.  
1972 The Leavenworth Site: Archaeology of an Historic  
Arikara Community. University of Kansas Publications  
in Anthropology, Number 3. Lawrence.

Lehmer, Donald J.  
1970 Climate and Culture History in the Middle Missouri  
Valley. In: Pleistocene and Recent Environments of  
the Central Great Plains, edited by Wakerfield Dert,  
Jr. and J. Knox Jones, Jr. Pp. 117-129. Department  
of Geology, University of Kansas, Special Publication  
3. University Press of Kansas, Lawrence.

Lehmer, Donald J.  
1971 Introduction to Middle Missouri Archaeology.  
Anthropological Papers I. National Park Service, U. S.  
Department of the Interior. Washington.

Miller, Carl F.  
1964 Archeological Investigations at the Mosherman Site  
(39P07), Oahe Reservoir Area, Potter County, South  
Dakota, 1956. River Basin Surveys Papers, No. 35.  
Bureau of American Ethnology, Bulletin 139. pp. 139-  
265. U. S. Government Printing Office, Washington.

National Park Service  
n.d. The National Register of Historic Places 1972.  
U. S. Government Printing Office. Washington.

Neuman, Robert A.  
1975 The Sonota Complex and Associated Sites on the  
Northern Great Plains. Publications in Anthropology,  
Number Six. Nebraska State Historical Society.  
Lincoln.

Owsley, Douglas W., Hugh E. Berryman and William M. Bass  
1977 Demographic and Osteological Evidence for Warfare  
at the Lanyon Site, South Dakota. In: Trends in  
Middle Missouri Prehistory: A Festschrift Honoring  
the Contributions of Donald J. Lehmer, edited by  
W. Raymond Wood. Plains Anthropologist 22(78) Pt. 2:  
119-131. Memoir 13. Lincoln.

Parmalee, Paul W.  
1977 The Avifauna from Prehistoric Arikara Sites in South  
Dakota. Plains Anthropologist 22(77):189-222. Lincoln.

Sigstad, John S. and Loanita Kant Sigstad  
1973 Archaeological Field Notes of W. H. Over. Research  
Bulletin Number 1. South Dakota State Archaeologist,  
Department of Education and Cultural Affairs, State  
of South Dakota.

Smith, Carlyle S.  
1963 Time Perspective Within the Coalescent Tradition in  
South Dakota. American Antiquity 28(4):489-495. Salt  
Lake City.

Stephenson, Robert L.  
1969 Blue Blanket Island (39WW7) An Historic Contact Site  
in the Oahe Reservoir Near Mobridge, South Dakota.  
Plains Anthropologist 14 (43):1-31. Lawrence.

1971 The Potts Village Site (39C019) Oahe Reservoir, North  
Central South Dakota. The Missouri Archaeologist 33.  
Columbia.

Strong, William Duncan  
1933 Studying the Arikara and their Neighbors on the Upper Missouri. Explorations and Field-Work of the Smithsonian Institution in 1932. Publication # 3213, pp. 73-76. Washington.

1940 From History to Prehistory in the Northern Great Plains. Smithsonian Miscellaneous Collections, Vol. 100:353-394. Essays in Historical Anthropology of North American, Smithsonian Institution. Washington.

Thiessen, Thomas D. and Robert K. Nickel  
1975 An Assessment of the Radiocarbon Dates for the Helb Site, 39CA208, South Dakota. Plains Anthropologist 20(70):307-310. Lincoln.

Van Bruggen, Theodore  
1976 The Vascular Plants of South Dakota. Ames: The Iowa State University Press.

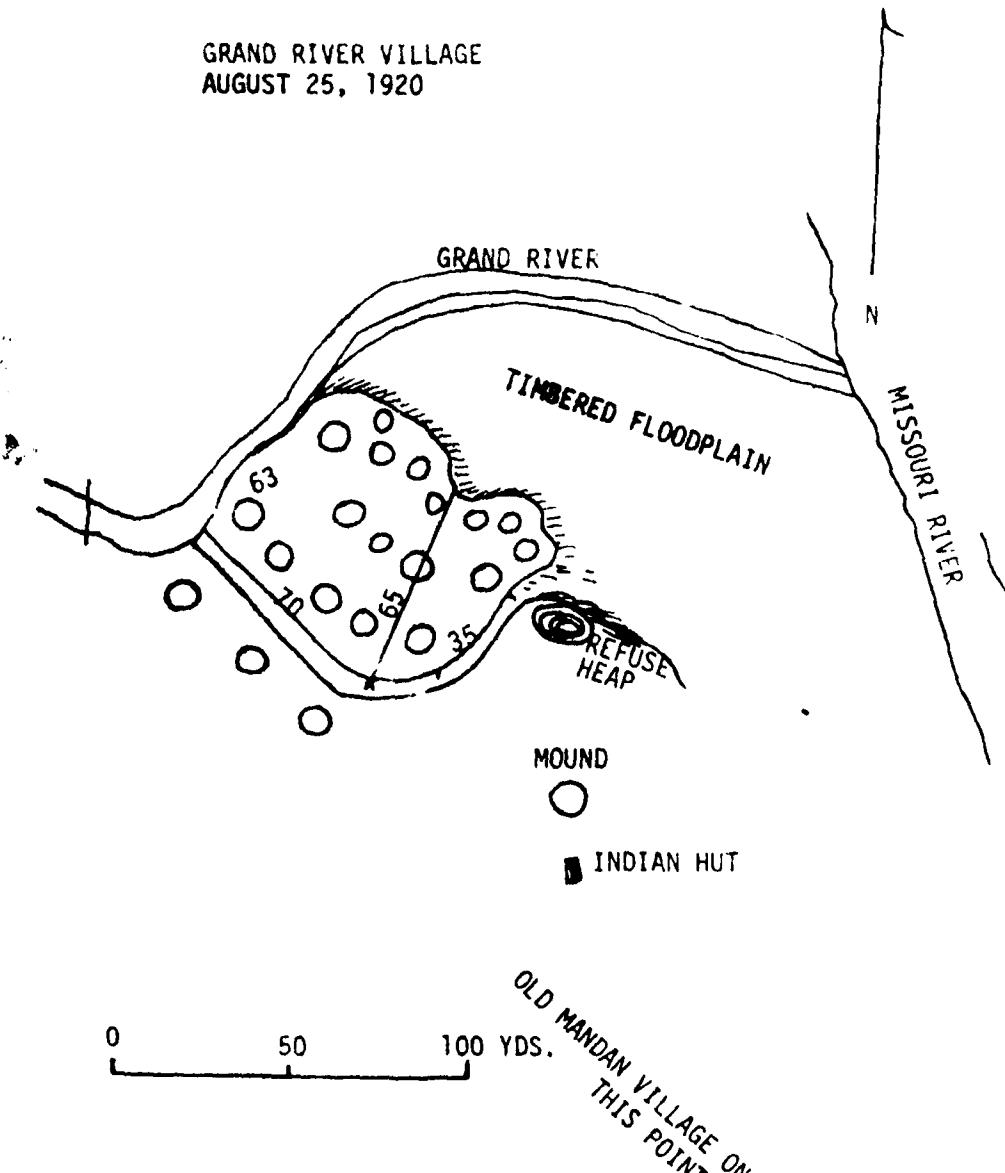
Wedel, Waldo R.  
1955 Archeological Materials from the Vicinity of Mobridge, South Dakota. Bureau of American Ethnology Bulletin 157, pp. 19-188, Anthropological Papers, No. 45. Smithsonian Institution. United States Government Printing Office. Washington.

1961 Prehistoric Man on the Great Plains. Norman: University of Oklahoma Press.

Wilmeth, Roscoe  
1958 Report of the Investigation of the Payne Site 39WW302 Walworth County, South Dakota 1956. Archaeological Studies Circular No. 8. Pierre: The South Dakota Archaeological Commission. 42 pp.

Woolworth, Alan R. and W. Raymond Wood  
1964 The Demery Site (39C01), Oahe Reservoir Area, South Dakota. River Basin Surveys Papers, No. 34. Smithsonian Institution. Bureau of American Ethnology, Bulletin 189. pp. 67-137. U. S. Government Printing Office, Washington.

GRAND RIVER VILLAGE  
AUGUST 25, 1920



ARIKARA INDIAN VILLAGE: KNOWN AS GRAND RIVER VILLAGE SITE, LOCATED AT MOUTH OF GRAND RIVER ON SOUTH SIDE.

Fig. 1. Map of W. H. Over labeled "Grand River Village" which is believed to actually be Red Horse Hawk (39C034). The "Old Mandan Village" indicated on the map is believed to have been assigned the site number 39C046 at one time and to be synonymous with the now more widely used site designation 39C0213 - Travis I Site. Map taken from Sigstad and Sigstad 1973:39.

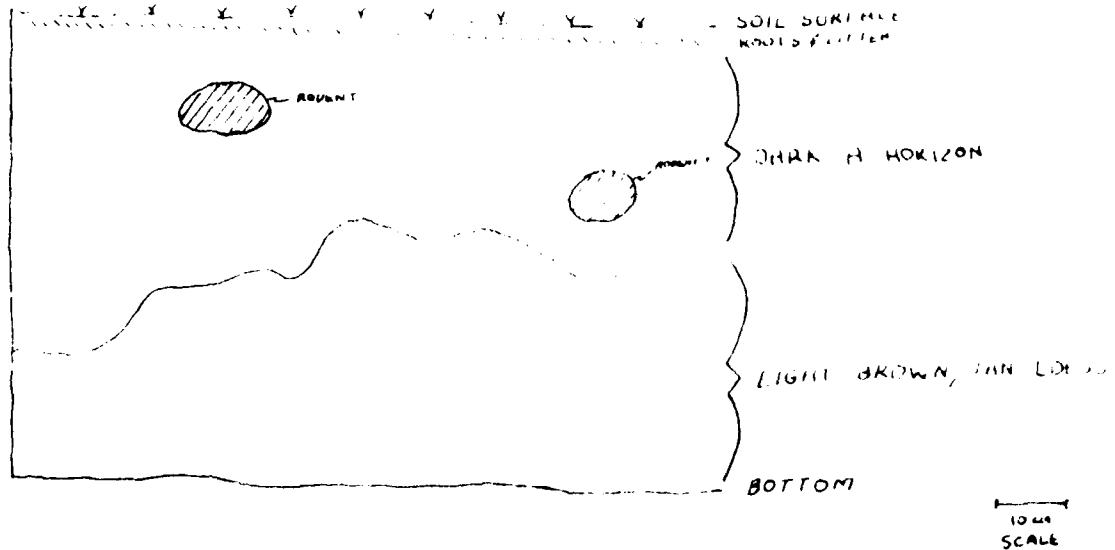


Fig. 2. Indian Memorial Recreation Area Project.  
Test Pit I - Profile - West Wall.

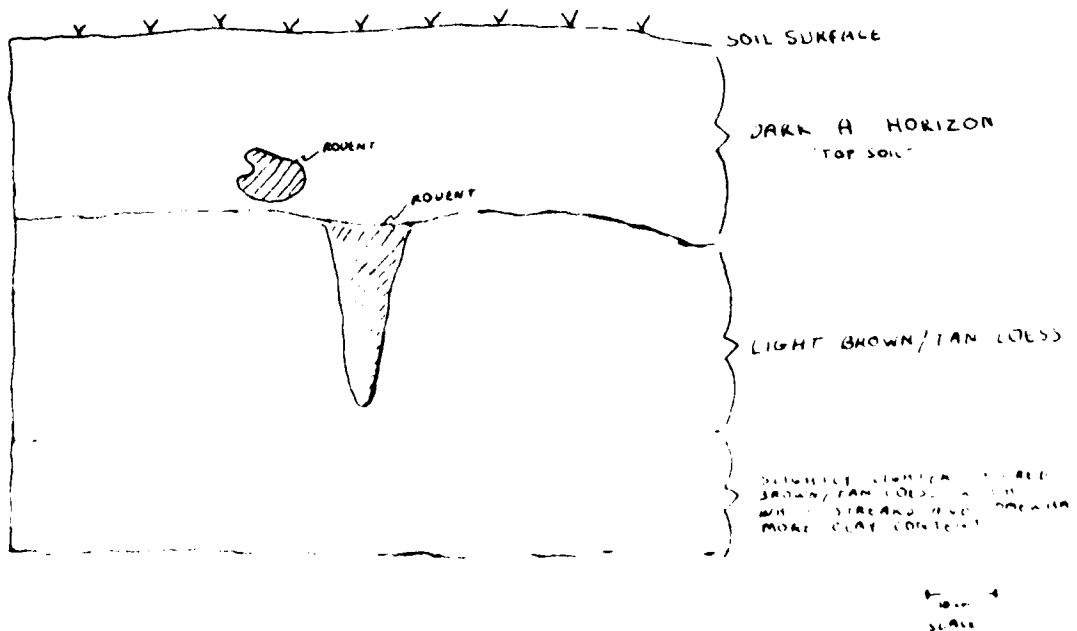
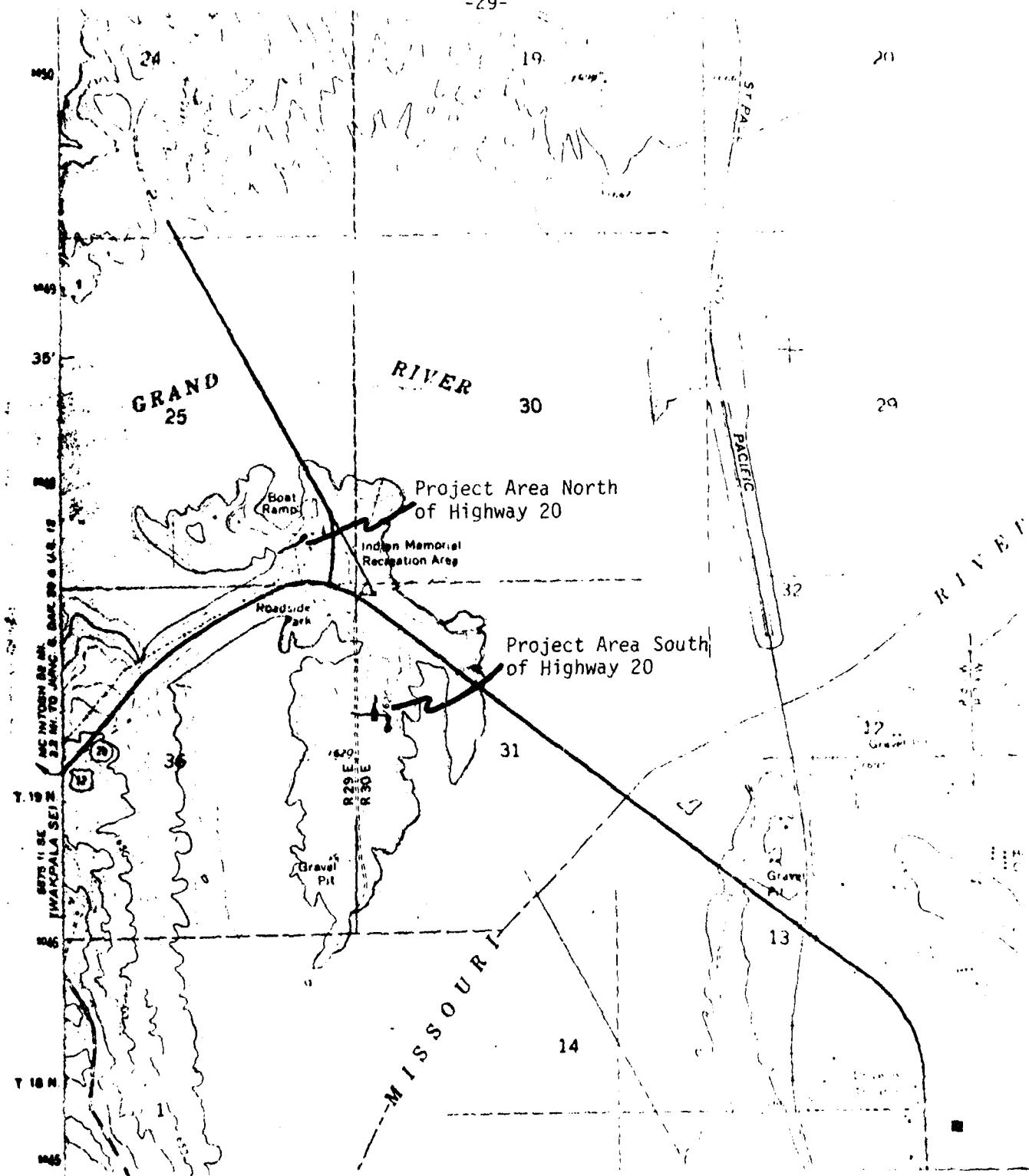
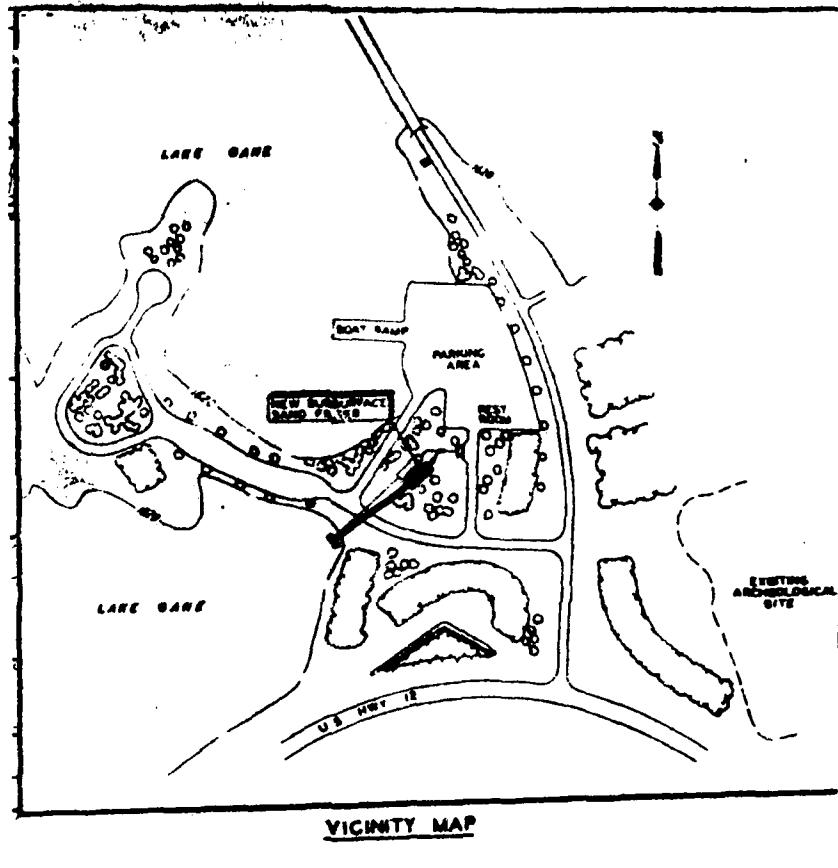


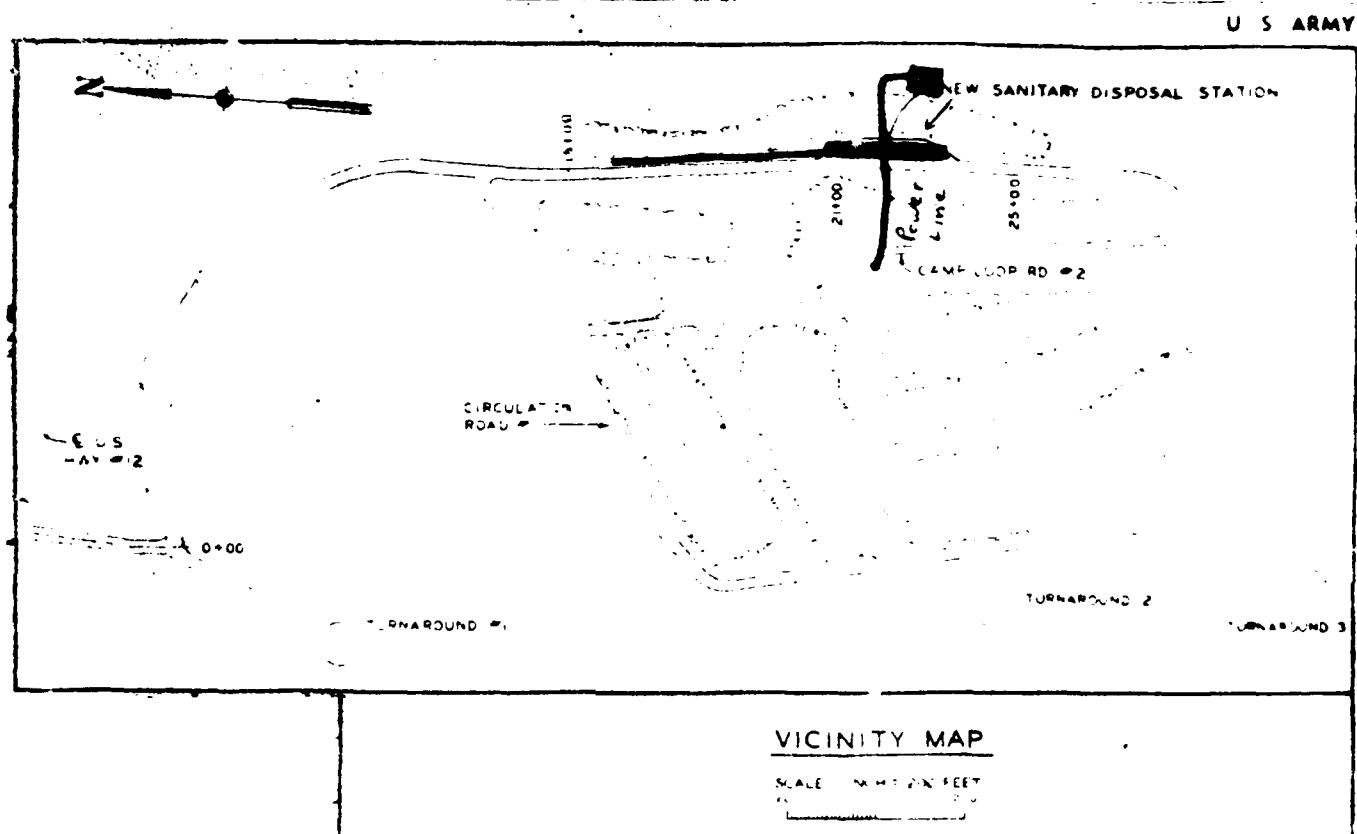
Fig. 3. Indian Memorial Recreation Area Project.  
Test Pit II - Profile - East Wall.



Map 1. Map showing the general locations of the two project areas investigated at the Indian Memorial Recreation Area. Map adapted from U. S. G. S. Mobridge, S. Dak., Quadrangle Map, 1967.



Map 2. Map indicating project plans in area north of Highway 20 at the Indian Memorial Recreation Area. Darkened area was tested. Map provided by the U.S. Army Corps of Engineers.



Map 3. Map indicating project plans in area south of Highway 20 at the Indian Memorial Recreation Area. Darkened areas were tested. Map provided by the U.S. Army Corps of Engineers.

